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Porter  
2/14/85

EPA POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT PART 1 - SITE INFORMATION AND ASSESSMENT				I. IDENTIFICATION	
				01 STATE IL	02 SITE NUMBER IL0180700967
II. SITE NAME AND LOCATION					
01 SITE NAME (Legal, common, or descriptive name of site) Amoco Oil Co. Refinery			02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER 400 S. Main St.		
03 CITY Wood River		04 STATE IL	05 ZIP CODE 60295	06 COUNTY Madison	07 COUNTY CODE 119
08 COORDINATES LATITUDE 38 50 05.1		LONGITUDE 090 06 09.0		IL Quad Map 221 d	
10 DIRECTIONS TO SITE (Starting from nearest public road) see attached map					
III. RESPONSIBLE PARTIES					
01 OWNER (If known) Amoco Chemical Co.			02 STREET (Business, mailing, residential) 200 E. Randolph Dr.		
03 CITY Chicago		04 STATE IL	05 ZIP CODE 60601	06 TELEPHONE NUMBER (312) 856-5858	
07 OPERATOR (If known and different from owner)			08 STREET (Business, mailing, residential)		
09 CITY		10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER (618) 251-2200	
13 TYPE OF OWNERSHIP (Check one) <input checked="" type="checkbox"/> A. PRIVATE <input type="checkbox"/> B. FEDERAL: _____ (Agency name) <input type="checkbox"/> C. STATE <input type="checkbox"/> D. COUNTY <input type="checkbox"/> E. MUNICIPAL <input type="checkbox"/> F. OTHER: _____ (Specify) <input type="checkbox"/> G. UNKNOWN					
14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply) <input checked="" type="checkbox"/> A. RCRA 3001 DATE RECEIVED: 9, 12, 84 MONTH DAY YEAR <input checked="" type="checkbox"/> B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: 6, 8, 81 MONTH DAY YEAR <input type="checkbox"/> C. NONE					
IV. CHARACTERIZATION OF POTENTIAL HAZARD					
01 ON SITE INSPECTION <input checked="" type="checkbox"/> YES DATE 2, 23, 76 MONTH DAY YEAR <input type="checkbox"/> NO 10/16/84			BY (Check all that apply) <input type="checkbox"/> A. EPA <input type="checkbox"/> B. EPA CONTRACTOR <input checked="" type="checkbox"/> C. STATE <input type="checkbox"/> D. OTHER CONTRACTOR <input type="checkbox"/> E. LOCAL HEALTH OFFICIAL <input type="checkbox"/> F. OTHER: _____ (Specify) CONTRACTOR NAME(S): _____		
02 SITE STATUS (Check one) <input checked="" type="checkbox"/> A. ACTIVE <input type="checkbox"/> B. INACTIVE <input type="checkbox"/> C. UNKNOWN		03 YEARS OF OPERATION 1908 BEGINNING YEAR ENDING YEAR UNKNOWN			
04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED heavy metals (toxic/persistent)    other inorganics (reactive) other organics (VOC emissions)    oily waste (soluble/flammable)					
05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION groundwater (population/environment)    vapor release (population/environment) surface water (population/environment)    fire/explosion (population/environment)					
V. PRIORITY ASSESSMENT					
01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents) <input checked="" type="checkbox"/> A. HIGH (Inspection required promptly) <input type="checkbox"/> B. MEDIUM (Inspection required) <input type="checkbox"/> C. LOW (Inspect on time available basis) <input type="checkbox"/> D. NONE (No further action needed, complete current disposition form)					
VI. INFORMATION AVAILABLE FROM					
01 CONTACT Ed. Sullivan		02 OF (Agency/Organization) Amoco		03 TELEPHONE NUMBER (312) 856-5858	
04 PERSON RESPONSIBLE FOR ASSESSMENT Sue Murphy		05 AGENCY EPA	06 ORGANIZATION HSCS	07 TELEPHONE NUMBER (217) 782-6760	08 DATE 2, 21, 85 MONTH DAY YEAR

EPA FORM 2070-12 (7-81)

EPA Region 5 Records Ctr.



291084



I HIGHLY VOLATILE  
 J EXPLOSIVE  
 K REACTIVE  
 L INCOMPATIBLE  
 M NOT APPLICABLE

Agency Files - Air, water, land, plus  
phone call to AMOCO - Ed Sullivan



POTENTIAL HAZARDOUS WASTE SITE  
PRELIMINARY ASSESSMENT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

IL PD980700967

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A GROUNDWATER CONTAMINATION  
03 POPULATION POTENTIALLY AFFECTED

77,200

02 ☐ OBSERVED (DATE \_\_\_\_\_)  
04 NARRATIVE DESCRIPTION

☒ POTENTIAL ☐ ALLEGED

Boring Logs show hydrocarbons at all depths tested to 50'

01 ☒ B SURFACE WATER CONTAMINATION  
03 POPULATION POTENTIALLY AFFECTED

UNK

02 ☐ OBSERVED (DATE \_\_\_\_\_)  
04 NARRATIVE DESCRIPTION

☒ POTENTIAL ☐ ALLEGED

IN Flood Plain of Mississippi.

01 ☒ C CONTAMINATION OF AIR  
03 POPULATION POTENTIALLY AFFECTED

80,000

02 ☐ OBSERVED (DATE \_\_\_\_\_)  
04 NARRATIVE DESCRIPTION

☒ POTENTIAL ☐ ALLEGED

Major air pollution source for SO<sub>2</sub>, NO<sub>x</sub> and HC with frequent violations noted.

01 ☒ D FIRE/EXPLOSIVE CONDITIONS  
03 POPULATION POTENTIALLY AFFECTED

49,300

02 ☐ OBSERVED (DATE \_\_\_\_\_)  
04 NARRATIVE DESCRIPTION

☒ POTENTIAL ☐ ALLEGED

Large quantities of Petroleum products stored & handled.  
S. Flare pit contains ignitable and reactive materials together.

01 ☒ E DIRECT CONTACT  
03 POPULATION POTENTIALLY AFFECTED

29,700

02 ☐ OBSERVED (DATE \_\_\_\_\_)  
04 NARRATIVE DESCRIPTION

☒ POTENTIAL ☐ ALLEGED

Large quantities of petroleum products and wastes.

01 ☒ F CONTAMINATION OF SOIL  
03 AREA POTENTIALLY AFFECTED

568  
(Acres)

02 ☐ OBSERVED (DATE \_\_\_\_\_)  
04 NARRATIVE DESCRIPTION

☒ POTENTIAL ☐ ALLEGED

Petroleum refinery for over 70 years. wastes stored on site.

01 ☒ G DRINKING WATER CONTAMINATION  
03 POPULATION POTENTIALLY AFFECTED

77,200

02 ☐ OBSERVED (DATE \_\_\_\_\_)  
04 NARRATIVE DESCRIPTION

☒ POTENTIAL ☐ ALLEGED

Local water from drift wells. Ground water recharged from Mississippi river. Test wells show hydrocarbons throughout.

01 ☒ H WORKER EXPOSURE/INJURY  
03 WORKERS POTENTIALLY AFFECTED

300

02 ☐ OBSERVED (DATE \_\_\_\_\_)  
04 NARRATIVE DESCRIPTION

☒ POTENTIAL ☐ ALLEGED

Includes workers at Tank Farm and Loading barges which are part of LWTP site ILD006272629

01 ☒ I POPULATION EXPOSURE/INJURY  
03 POPULATION POTENTIALLY AFFECTED

80,000

02 ☐ OBSERVED (DATE \_\_\_\_\_)  
04 NARRATIVE DESCRIPTION

☒ POTENTIAL ☐ ALLEGED



POTENTIAL HAZARDOUS WASTE SITE  
PRELIMINARY ASSESSMENT  
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

IL IL1980700967

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA  
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE \_\_\_\_\_)

☐ POTENTIAL

☐ ALLEGED

01 ☐ K. DAMAGE TO FAUNA  
04 NARRATIVE DESCRIPTION (include name(s) of species)

02 ☐ OBSERVED (DATE \_\_\_\_\_)

☐ POTENTIAL

☐ ALLEGED

01 ☐ L. CONTAMINATION OF FOOD CHAIN  
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE \_\_\_\_\_)

☐ POTENTIAL

☐ ALLEGED

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES  
(Soils, runoff, standing liquids, leaking drums)

02 ☒ OBSERVED (DATE 3/23/86)

☐ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED \_\_\_\_\_

04 NARRATIVE DESCRIPTION

10/18/84

Frequent excursions reported of H<sub>2</sub>S gas, gasoline, hydrogen sulfide, propane, ammonia.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY  
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE \_\_\_\_\_)

☐ POTENTIAL

☐ ALLEGED

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs  
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE \_\_\_\_\_)

☐ POTENTIAL

☐ ALLEGED

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING  
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE \_\_\_\_\_)

☐ POTENTIAL

☐ ALLEGED

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED:

80,000

IV. COMMENTS

Investigation should include WWTP site (FLD006272629) and Riverfront (ILD980503221) which are contiguous,

V. SOURCES OF INFORMATION (See specific references, e.g. state files, sample analysis, reports)

Agency files - Air, water - Land - PWS

Phone call to Amoco - Ed Sullivan

## EXECUTIVE SUMMARY

Amoco Oil Co. Refinery, ILD980700967 & ILT180012072, located at 400 South Main Street in Wood River, IL is a 568 acre site which was operated as Amoco Oil Refinery until May 1981 when the refinery was closed. At that time Amoco Chemical Corporation took over the site to continue manufacture of additives for petroleum products. It is referred to as the Main Plant and is adjacent on the west side to the Amoco WWT site (ILD006272629) and the Riverfront site (ILD980503221).

The Main Plant has several permits from DAPC and is considered a major emission source for SO<sub>2</sub>, NO<sub>X</sub> and HC. Actual emissions (in tons per year) under average production are:

<u>TSP</u>	<u>SO<sub>2</sub></u>	<u>NO<sub>X</sub></u>	<u>HC</u>	<u>CO</u>
50	705	341	613	25

Since 1976 several malfunctions have been reported to the Agency during which excessive emissions of flue gas, propane, ammonia, hydrogen sulfide or gasoline escaped to the atmosphere. On 1/29/85 the facility was cited for operation of a detergent additive process without the scrubber required by permit condition.

Seven areas of the facility may contain toxic materials.

1. The most northerly cell of the spray ponds showed high sulfided levels in 8/84.
2. The south flare pit has been used to dispose of both sulfides and sulfurphosphide - ignitable and reactive waste. Tests of the pit showed high lead levels but no sulfides.
3. A dumpster is used to physically treat calcium oxide bags which could generate enough heat to ignite. Bags are soaked with water in the dumpster and the water runs out to waste water treatment.
4. Several tanks contained wastes which may still be present.
  - a. tank 279 - formaldehyde.
  - b. two tanks at the closed Dr. Sweetning Plant - residue from lead sulfide.
  - c. at the closed refinery - leaded gasoline tanks.
  - d. at the closed asphalt plant - asphalt residue in tanks.
5. At the closed Dr. Sweetning Plant 7,000 lbs. of aluminum chloride was dumped in a pit with 7,500 lbs. of lime in 6/82.

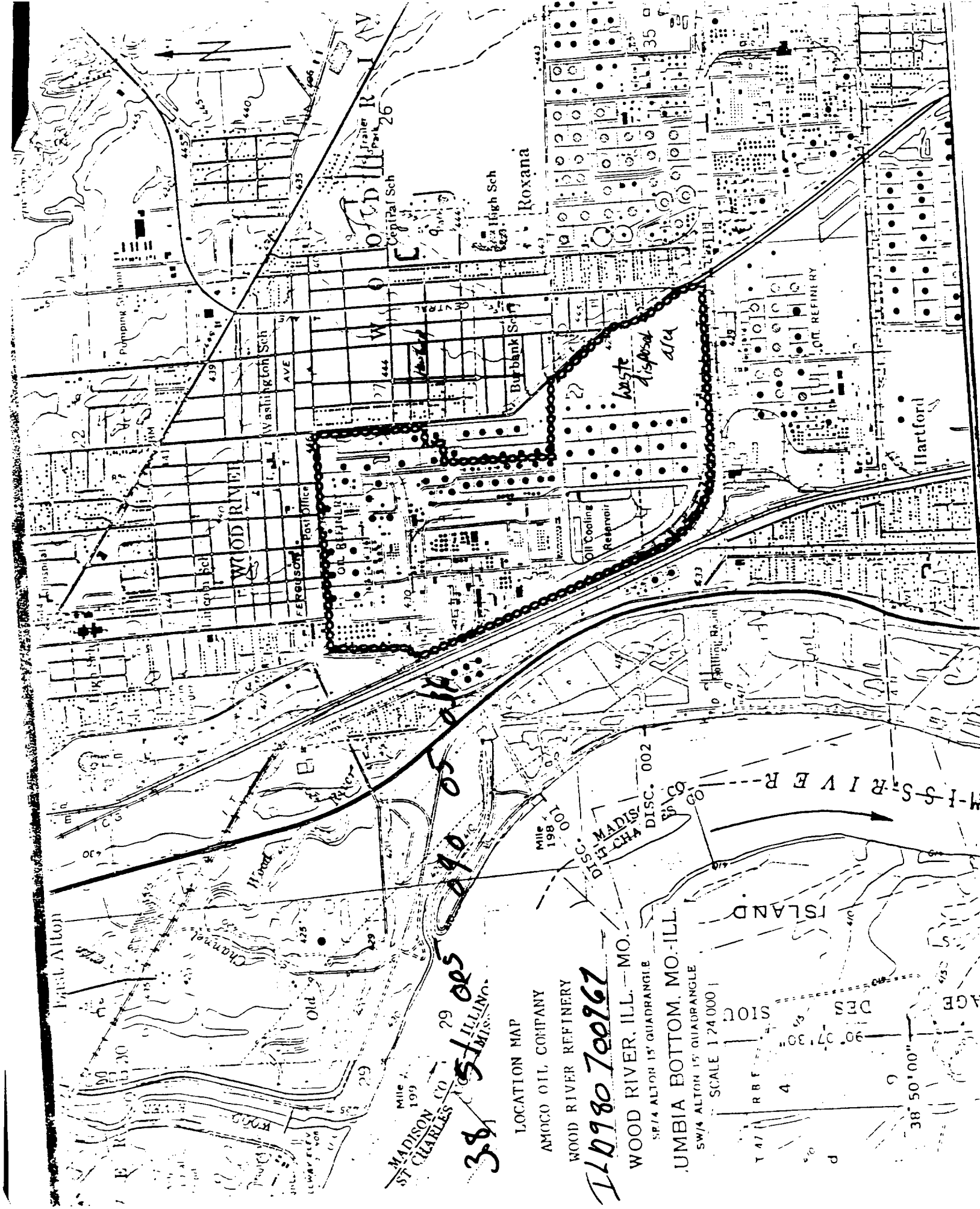
6. A roadside ditch in the south central area has been used for disposal of an oily liquid.
7. A fairly large area west of the spray ponds is identified in the 103-C form as having been used in the past for waste disposal - amount and type unknown. The westernmost portion of this area has been used for disposal of leaded tank bottoms and butane polymerization waste.

A groundwater monitoring program was started 12/82. Sixty test wells were drilled in the Main Plant Area. Problems have delayed test results but boring logs note the presence of hydrocarbons throughout.

Amoco owned a waste water treatment plant (ILD006272629) adjacent to this site until 1984 when it was donated to the city of Wood River. The cities of Wood River and East Alton obtain their water from drift wells. A 9/8/83 evaluation by the State Geological Survey concludes that the probability of groundwater contamination is very high. A hydrogeologic study included with the 1/31/85 Closure Plan for the Riverfront site states that the aquifer underlying the flood plain is so heavily developed that the pumping of water supply wells within the alluvial/glacial outwash has reversed the groundwater gradient from flowing toward the Mississippi River to flowing from the Mississippi River. This condition makes the Mississippi River a groundwater recharge source at this site. Even though there are no surface water intakes in this area, the pumping has the effect of a surface water intake. Surface water contamination has probably been taking place from the Riverfront site for many years, and groundwater contamination is likely from lagoons and refinery operations. Therefore, contamination of local wells is a definite possibility that should be investigated.

A RCRA closure plan was approved by the IEPA 1/11/85 to include all 7 areas listed above. It is not known how soon closure is to take place or if it would be considered adequate under CERCLA. Therefore, a high priority for inspection is recommended for this site and for the Riverfront and waste water treatment plant sites which should be investigated at the same time.

SM:mkb:S/97



38 51 025 040 05 011  
MADISON CO. ILLINOIS  
ST CHARLES

LOCATION MAP

AMOCO OIL COMPANY

WOOD RIVER REFINERY

IL 0980 700967

WOOD RIVER, ILL. - MO.

SP/4 ALTON 15' QUADRANGLE

UMBIA BOTTOM, MO. ILL.

SW/4 ALTON 15' QUADRANGLE

SCALE 1:24,000

ST 07' 30"

DES

AGE

38° 50' 00"

90° 07' 30"

ST 07' 30"

DES

AGE

38° 50' 00"

90° 07' 30"

ST 07' 30"

DES

AGE

DISC. 002  
MADISON  
DISC. 002

MISSISSIPPI RIVER

ISLAND

Mile 198

Mile 199

Mile 200

Mile 201

Mile 202

Mile 203

Mile 204

Mile 205

Mile 206

Mile 207

Mile 208

Mile 209

Mile 210

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